









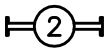


















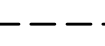







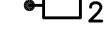





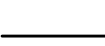





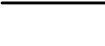

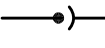

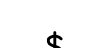
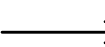




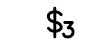





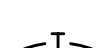

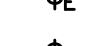


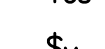
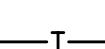





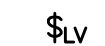































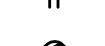


































ELECTRICAL LEGEND					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LIGHTING NUMBER WITHIN OR ADJACENT TO FIXTURE INDICATES FIXTURE TYPE. RE: FIXTURE SCHEDULE		PAGING/SOUND SUBSCRIPTS: R RECESSED WP WEATHERPROOF S SURFACE VC VOLUME CONTROL DB DOUBLE BAFFLE		FIRE ALARM FIRE ALARM CONTROL PANEL
	FLUORESCENT LIGHTING FIXTURE, RECESSED IN CEILING		SPEAKER RECESSED IN CEILING, UNO		FIRE ALARM SYSTEM ANNUNCIATOR
	FLUORESCENT LIGHTING FIXTURE ON EMERGENCY OR STANDBY POWER SOURCE		SPEAKER WALL MOUNTED		MANUAL PULL STATION (MTD. 46" AFF TO CENTER, UNO)
	FLUORESCENT LIGHTING FIXTURE SURFACE MOUNTED OR PENDANT MOUNTED FROM CEILING, UNO		SPEAKER - TRUMPET TYPE, WALL MOUNTED, UNO		ALARM HORN
	FLUORESCENT STRIP LIGHTING FIXTURE		BUZZER		COMBINATION HORN/STROBE (MTD. 80" AFF TO CENTER, UNO)
	FLUORESCENT LIGHTING FIXTURE WALL MOUNTED		VOLUME CONTROL WALL MOUNTED 46" AFF TO CENTER, UNO		ALARM BELL
	LIGHTING FIXTURE CEILING MOUNTED		CIRCUITING/RACEWAY BRANCH CIRCUIT CONCEALED ABOVE CEILING OR WITHIN WALL. TICK MARKS INDICATE NUMBER OF CONDUCTORS, () INDICATES GROUND CONDUCTOR, NO TICK MARKS INDICATES 2 #12, 1 #12GND., 3/4"C., UNO		COMBINATION BELL/STROBE (MTD. 80" AFF TO CENTER, UNO)
	LIGHTING FIXTURE ON EMERGENCY OR STANDBY POWER SOURCE		CONDUIT ROUTED EXPOSED		ALARM STROBE LIGHT (MTD. 80" AFF TO CENTER, UNO)
	LIGHTING FIXTURE WALL MOUNTED		CONDUIT ROUTED CONCEALED WITHIN OR BELOW FLOOR OR CONCRETE		SMOKE DETECTOR (UF = UNDERFLOOR)
	WALLWASH LIGHTING FIXTURE. OPEN SIDE INDICATES DIRECTION OF ILLUMINATION.		HOMERUN TO PANEL INDICATED. ARROWHEADS INDICATE NUMBER OF CCTS.		HEAT DETECTOR
	EMERGENCY WALL PACK FIXTURE		PART CIRCUIT HOMERUN		DUCT MOUNTED SMOKE DETECTOR
	EXIT LIGHT WALL MOUNTED 8'-0" AFF TO CENTER, UNO SHADED AREA(S) INDICATE ILLUMINATED FACE(S)		LOW VOLTAGE WIRING IN CONDUIT		FLOW SWITCH
	EXIT LIGHT CEILING MOUNTED		CONDUIT TURNING UP		TAMPER SWITCH
	EXTERIOR POLE MOUNTED LIGHTING FIXTURE		CONDUIT TURNING DOWN		PRESSURE SWITCH
	SWITCHES MOUNT 46" AFF TO CENTER, UNO SUBSCRIPTS: WP WEATHERPROOF (TAYMAC #40110 OR EQUAL) EP EXPLOSIONPROOF LV LOW VOLTAGE P PILOT LIGHT C COUNTER TOP MOUNTED (MOUNT 5" ABOVE BACKSPLASH TO CENTER)		CONDUIT CHANGE IN ELEVATION		DOOR HOLDER
	SINGLE POLE, SINGLE THROW WALL SWITCH		CONDUIT CAPPED FOR FUTURE USE		CONTROL ZAM
	DOUBLE POLE, SINGLE THROW WALL SWITCH		CONDUIT SEAL (APPLETON #EYSEF OR EQUAL)		INDIVIDUAL ADDRESSABLE MODULE
	THREE WAY WALL SWITCH		EXISTING CONDUIT TO BE REMOVED		SECURITY/INTRUSION ALARM
	FOUR WAY WALL SWITCH		CABLE TRAY		INTRUSION ALARM DOOR SWITCH
	DIMMER SWITCH		WIREWAY		REMOTE DOOR LOCK/UNLOCK CONNECTION
	PRESET LIGHTING CONTROL ENTRY SWITCH		DUCTBANK		DOOR ENTRY DEVICE CONTACT
	OCCUPANCY SENSOR WALL SWITCH		BUSWAY		DOOR EXIT DEVICE CONTACT
	MANUAL MOTOR STARTER		BELOW RAISED ACCESS FLOOR 3/4" LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT WITH PULLWIRE FOR TELECOMMUNICATIONS		DOOR OPERATOR CONNECTION
	KEY SWITCH. (LEVITON #122*-KL WITH WALLPLATE #84071-40, TYPE 302)		3/4" LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT WITH PULLWIRE FOR TELECOMMUNICATIONS		CARD READER
	LOW VOLTAGE SWITCH		EMT SIZED AS NOTED WITH PULLWIRE FOR TELECOMMUNICATIONS		SECURITY CAMERA
	SPRING WOUND TIMER SWITCH. (TORK #A560MH OR EQUAL)		3/4" LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT WITH 2 #12, 1 #12 GND. FOR POWER, UNO		ELEMENTARY DIAGRAM
	RECEPTACLES MOUNT 48" AFF TO CENTER, UNO SUBSCRIPTS: GFI GROUND FAULT CIRCUIT INTERRUPTER WP WEATHERPROOF WHILE IN USE (TAYMAC #20510 OR EQUAL) EP EXPLOSIONPROOF SP SURGE PROTECTED IG ISOLATED GROUND C COUNTER TOP MOUNTED (MOUNT 5" ABOVE BACKSPLASH TO CENTER)		POWER DISTRIBUTION 480V PANELBOARD SURFACE MOUNTED, UNO 480V PANELBOARD FLUSH MOUNTED, UNO 208V PANELBOARD SURFACE MOUNTED, UNO 208V PANELBOARD FLUSH MOUNTED, UNO SAFETY DISCONNECT SWITCH  = FUSE SIZE (INF=NON-FUSED)  = SWITCH SIZE SAFETY DISCONNECT SWITCH PROVIDED WITH EQUIPMENT MOTOR STARTER  = STARTER NEMA SIZE MOTOR STARTER OR CONTROL PANEL FURNISHED WITH EQUIPMENT COMBINATION MOTOR STARTER AND DISCONNECT SWITCH  = STARTER NEMA SIZE COMBINATION MOTOR STARTER/DISCONNECT SWITCH OR CONTROL PANEL PROVIDED WITH EQUIPMENT VARIABLE FREQUENCY DRIVE MOTOR (HORSEPOWER AS INDICATED) TRANSFORMER JUNCTION BOX JUNCTION BOX, WALL MOUNTED PULL BOX UNDERFLOOR DUCT JUNCTION BOX	 TRIP SIZE FRAME SIZE DRAW OUT CIRCUIT BREAKER	
	SIMPLEX RECEPTACLE OUTLET		480V PANELBOARD SURFACE MOUNTED, UNO		FUSE
	DUPLEX RECEPTACLE OUTLET		480V PANELBOARD FLUSH MOUNTED, UNO		SWITCH
	QUADPLEX RECEPTACLE OUTLET		208V PANELBOARD SURFACE MOUNTED, UNO		FUSED SWITCH
	SPECIAL PURPOSE RECEPTACLE MOUNTED 48" AFF, UNO RE: PLANS		208V PANELBOARD FLUSH MOUNTED, UNO		TRANSFORMER
	SIMPLEX FLOOR OUTLET		SAFETY DISCONNECT SWITCH		DELTA PRIMARY, WYE GROUNDED SECONDARY
	DUPLEX FLOOR OUTLET		SAFETY DISCONNECT SWITCH PROVIDED WITH EQUIPMENT		MEDIUM VOLTAGE LOADBREAK SEPARABLE CONNECTOR
	QUADPLEX FLOOR OUTLET		MOTOR STARTER		MEDIUM VOLTAGE DEADBREAK SEPARABLE CONNECTOR
	SPECIAL PURPOSE FLOOR OUTLET, RE: PLANS		MOTOR STARTER OR CONTROL PANEL FURNISHED WITH EQUIPMENT		GROUND
	ACCESS FLOOR SERVICE MODULE - POWER ONLY		COMBINATION MOTOR STARTER AND DISCONNECT SWITCH		POTENTIAL TRANSFORMER
	ACCESS FLOOR SERVICE MODULE - POWER AND COMMUNICATIONS		COMBINATION MOTOR STARTER/DISCONNECT SWITCH OR CONTROL PANEL PROVIDED WITH EQUIPMENT		CURRENT TRANSFORMER
	COMMUNICATIONS PROVIDE 4" SQUARE, 2-1/8" DEEP BOX WITH APPROPRIATE SINGLE-GANG DEVICE RING FLUSH MTD 18" AFF TO CENTER AND 1" CONDUIT WITH SPECIFIED CABLING ROUTED TO NEAREST TELEPHONE ROOM, UNO		VARIABLE FREQUENCY DRIVE		OVERLOAD RELAY
	TELEPHONE OUTLET		MOTOR (HORSEPOWER AS INDICATED)		LIGHTNING ARRESTOR
	WALL MOUNT TELEPHONE AT 54" AFF TO CENTER, UNO.		TRANSFORMER		AMMETER
	TELEPHONE PAYSTATION OUTLET, MOUNT 54" AFF TO CENTER, UNO.		JUNCTION BOX		VOLTMETER
	DATA OUTLET		JUNCTION BOX, WALL MOUNTED		AMMETER SWITCH
	COMBINATION TELEPHONE/DATA OUTLET WITH (2) RJ-11 JACKS (TELEPHONE) AND (1) RJ-45 JACK (DATA)		PULL BOX		VOLTMETER SWITCH
	WIRELESS ACCESS POINT		UNDERFLOOR DUCT JUNCTION BOX		PILOT LIGHT (R=RED, G=GREEN, A=AMBER)
			CONTROL/MISC PUSHBUTTON STATION PHOTOELECTRIC CELL. MOUNT FACING NORTH WHENEVER POSSIBLE THERMOSTAT OR TEMPERATURE SENSOR. RE: MECHANICAL CONTROL DEVICE: LS = LIMIT SWITCH, FS = FLOAT SWITCH, SV = SOLENOID VALVE GROUND ROD GROUND WELL METER CONDUIT SEAL-OFF FITTING		RELAY COIL (SUBSCRIPT INDICATES NUMBER OF CONTACTS)
					NORMALLY OPEN CONTACT (SUBSCRIPT INDICATES COIL AND CONTACT NUMBER)
					NORMALLY CLOSED CONTACT
					THERMAL OVERLOAD RELAY CONTACT
					SOLENOID
					NORMALLY OPEN PUSHBUTTON
					NORMALLY CLOSED PUSHBUTTON
					HAND-OFF-AUTO SWITCH
					DOUBLE THROW SWITCH
					NORMALLY CLOSED LIMIT SWITCH
					NORMALLY OPEN LIMIT SWITCH
					PRESSURE SWITCH
					TEMPERATURE SWITCH (FS=FREEZE STAT)
					FLOAT SWITCH
					FLOW SWITCH

NOTE: ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT

ABBREVIATIONS	
ABBREVIATION	DESCRIPTION
A OR AMP	AMPERES
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
AIC	ASYMMETRICAL AMPS INTERRUPTING CAPACITY
ARF	ABOVE RAISED FLOOR
AWG	AMERICAN WIRE GAUGE
AV	AUDIBLE AND VISUAL
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BKR	BREAKER
BOF	BOTTOM OF FIXTURE
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CCT	CIRCUIT
CU	COPPER
DDC	DIRECT DIGITAL CONTROL
EG	EQUIPMENT GROUND
ELEC	ELECTRICAL
EMCS	ENERGY MANAGEMENT & CONTROL SYSTEM
ENT	ELECTRICAL METALLIC TUBING
EP	EXPLOSION PROOF
ETC.	ET CETERA
EWC	ELECTRIC WATER COOLER
EXIST.	EXISTING
FA	FIRE ALARM
FIC	FIBER OPTIC INTERCONNECT CENTER
FMC	FLEXIBLE METALLIC CONDUIT
GFI OR GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND.	GROUND
GSCI	GOVERNMENT SUPPLIED, CONTRACTOR INSTALLED
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
IA	INTRUSION ALARM
IE.	THAT IS
IG	ISOLATED GROUND
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KWH	KILOWATT HOUR
LTFC	LIQUID TIGHT FLEXIBLE METALLIC CONDUIT
LV	LOW VOLTAGE
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MH	MANHOLE
MIN	MINIMUM
MISC.	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MTG	MOUNTING
N/A	NOT APPLICABLE
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEUT.	NEUTRAL
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NL	NIGHT LIGHT (CONNECT TO UNSWITCHED CIRCUIT)
OC	ON CENTER
OH	OVERHEAD
PC	PART CIRCUIT
PNL	PANELBOARD
PTT	PUSH TO TEST
PVC	POLYVINYL CHLORIDE
RE:	REFERENCE
RGSC	RIGID GALVANIZED STEEL CONDUIT
SCH.	SCHEDULE
SPECS	CONTRACT SPECIFICATIONS
S/N	SOLID NEUTRAL
TOF	TOP OF FIXTURE
TTB	TELEPHONE TERMINAL BOARD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UG	UNDERGROUND
UGC	UNDERGROUND COMMUNICATIONS
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WP	WEATHERPROOF
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER
ø	PHASE
+48"	MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER, UNO
-48"	MOUNTING HEIGHT BELOW FINISHED FLOOR TO CENTER, UNO

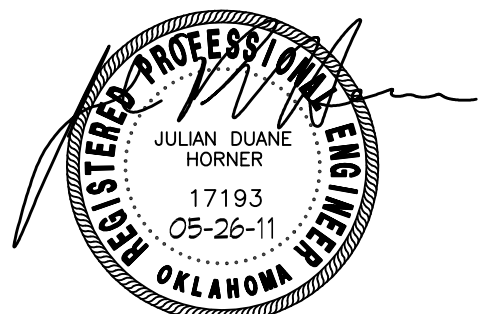
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DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION MIKE MONRONEY AERONAUTICAL CENTER - OKLAHOMA CITY, OKLAHOMA				
PSL - POWER SERVICES LABORATORY				
ELECTRICAL LEGEND AND ABBREVIATIONS Construction Work Request No: 09-018745				
PREPARED BY Rees Associates		APPROVED BY Jon Berkman		
DESIGNED JGH	ISSUED BY OFFICE OF BLP	DATE May 26, 2011	E-001	
DRAWN BLP	FACILITY MANAGEMENT AMP-400	DRAWING NO. 08-008257	1 of 31	